

WE CLAIM:

1. A flexible, solid fire sealing composition comprising:
 - (a) water-insoluble intumescent mineral granules;
 - (b) a thermoplastic or thermosetting, halogen-free binder; and
 - (c) a phosphorus containing flame retardant,wherein said composition has a softness value from about 0.01 to about 3.75 mm.
2. The composition of claim 1, wherein the intumescent mineral granules comprise a mixture of hydrated alkali metal silicate and at least one oxyboron compound, expandable graphite, or a mixture thereof.
3. The composition of claim 1, wherein the intumescent mineral granules comprise a mixture of hydrated alkali metal silicate and at least one oxyboron compound.
4. The composition of claim 1, wherein the intumescent mineral granules comprise expandable graphite.
5. The composition of claim 1, wherein the halogen-free binder comprises an ethylene vinyl acetate copolymer, a synthetic or natural rubber, or a blend thereof.
6. The composition of claim 1, wherein the flame retardant comprises ammonium polyphosphate.
7. The composition according to claim 1 comprising:
 - (a) about 25 to about 60 wt-% of water-insoluble intumescent granules;
 - (b) about 12 to about 40 wt-% of a thermoplastic or thermosetting, halogen-free binder; and
 - (c) about 15 to about 40 wt-% of a phosphorus containing flame retardant.
8. The composition of claim 7, wherein the binder is an ethylene vinyl acetate copolymer.
9. The composition of claim 7, wherein the binder is a blend of an ethylene vinyl acetate copolymer and a natural or synthetic rubber.
10. The composition of claim 9, wherein the binder is a blend of ethylene vinyl acetate and synthetic isoprene.
11. A method of fire stopping a through-penetration comprising applying a flexible, solid fire sealing composition according to claim 1 to said through-penetration and allowing the composition to expand and char upon application of heat.

12. A method of fire stopping doors and windows comprising applying a flexible, solid fire sealing composition according to claim 1 to said doors and windows and allowing the composition to expand and char upon application of heat.

5 13. A process for preparing a flexible, solid fire sealing composition comprising high shear mixing in a substantially volatile-free state:

- (a) water-insoluble intumescent mineral granules;
- (b) a thermoplastic or thermosetting, halogen-free binder; and
- (c) a phosphorus containing flame retardant;

10 wherein the resulting composition has a softness value from about 0.01 to about 3.75 mm.

14. The process of claim 13, wherein a twin-screw extruder is used for high shear mixing.

15 15. The process of claim 14, wherein components (a), (b) and (c) are added to a heated zone of the twin-screw extruder where volatiles, if present, are removed prior to entering a mixing zone of said extruder.

Sub
a' 7

Add
b' 7